REMARKS

SPECIFICATION

The Examiner has objected to the specification as failing to provide antecedent basis for the claim limitations "thin" straight edge. The claims have been amended to change "thin" to "substantially flat" as stated in the specification (e.g., p.7, ln.4) and shown in the Figures (2, 3, 7, 12 and 13).

35 U.S.C. SECTION 102 AND 103

The Examiner has rejected claims 12, 13, 15 and 17 under 35 U.S.C. § 102 as anticipated by Bahar and claim 16 under 35 U.S.C. § 103 as unpatentable over Bahar in view of Queen. Claims 12 and 17 are independent claims.

Applicant's disclosure relates to "machinist's tools" and more particularly to tools for checking the "accuracy of machining" on a workpiece (p.1, ln.3-4). Machinist's tools are recognized in the industry as involving highly accurate tolerance standards. The purpose of applicant's machinist's tool is to indicate not only the existence of flaws in a workpiece but also their location and severity (p.1., ln.17-18). Applicant's device is described in the specification as a "straight edge" which consists of a "substantially flat, elongated member" (p.7, ln.3-4). In *Webster's Encyclopedia Unabridged Dictionary of the English language, 1989 edition*, "straight edge" is defined as "a bar or strip of wood or metal . . . for use in drawing or testing straight lines, planes, etc." Applicant's device is used in "testing" (p.2, ln.3-14). The testing edge is illuminated and flaws in the workpiece "result in corresponding gaps between the workpiece and the edge" of the straight edge (p.7, ln.24-25) so that the light reveals the "existence, length and severity" of the flaw (p.7, ln. 26-27). In the lengthwise cavity embodiments of claims 12, 13, 15 and 17, the straight edge 80 is said to be an elongated member 81 with a testing edge 82 along its length and the lengthwise cavity 83 in the edge 82 (p.9, ln.16-19). If there is a flaw, light from

the cavity will be observed on either side of the straight edge to permit determination of the "location, length and severity" of the flaw (p.10, ln.3-6).

Applicant's claims 12, 13, 15, 16 and 17 all require, among other elements, a substantially flat elongated member having a straight edge and a lengthwise cavity in the straight edge. In arguing rejection of the claims, the Examiner states that Bahar discloses an elongated member (box 10 is considered by the Examiner to be an elongated member) with a straight edge (bottom edge 21 is considered by the Examiner to be a straight edge) and with a lengthwise cavity (chamber 19 is considered by the Examiner to be a lengthwise cavity). Applicant respectfully disagrees.

Applicant's "substantially flat elongated member having a straight edge" is not disclosed by Bahar's box 10. Not everything that has a straight edge is usable as a straight edge. Bahar defines a box (Figures 1-5; Col.1, ln. 25-29) which may be rectangular, oblong, hexagonal or other shape (Col.2, ln.57-59). Whatever shape is chosen for Bahar's box, however, the box is dedicated to establishing a plane along its bottom edge (Col.1, ln.28, 33-34, 37; Col.2, ln.12-14, 16-20). The box of Bahar is used to determine when one planar tile is in the same plane as another planar tile. Looking at Bahar's Figures 2 and 3 (copies attached), applicant has identified points A-H which are, by definition, in a common plane. Furthermore, Bahar's tiles 23 and 26 are each planar members. When Bahar's box 10 is rested on a first tile 23, points A, B, E and F conform the box 10 to the plane of the first tile 23. When another planar tile 26 is simultaneously in contact with points C, D, G and H on the box 10, it also is in the same plane as the first tile 23. The box 10, therefore, indicates the common planarity of the two planar tiles, but does not indicate the location of any flaws in the tiles themselves. This can be understood in relation to Figures 2 and 3 in Bahar in light of a rather common difficulty encountered in trying to balance the corner legs of a table. Considering Bahar's box 10 to be a table with legs A, B

and D on the ground, applying force to the table at leg C will tip the table on legs B and D so that leg C touches the ground and leg A does not. Is point A and/or C too low, or are points B and/or D too high? The location of a flaw cannot be determined by the box 10 because a flaw at any point on the box perimeter changes the plane of the entire perimeter. That is, any flaw introduces problems in both X and Y coordinates. Therefore, the location of the flaw cannot be determined by use of the box 10.

On the other hand, applicant's claimed substantially flat "elongated member having a straight edge" is used to determine the existence, location and severity of flaws in the workpiece, not just to make separate planar pieces fall in a common plane. This difference in use is important, but the difference in use is not the claimed difference. The claimed difference is the difference in structure that allows applicant's device to accomplish its purpose as opposed to Bahar. Applicant's "straight edge" on the "substantially flat elongated member" is applied to the work surface. If we look at sketches 1 through 3 attached, the difference between applicant's thin, straight edge and Bahar's edge 21 can be quickly understood. As shown in sketch 1, if we align applicant's thin straight edge on a workpiece so that applicant's device extends from A to B along the thin straight edge, then it is possible, for example with a pencil, to mark exactly on the surface the location of relative highs and lows in the workpiece. Let us assume for the purposes of discussion that low points on the surface are to be plotted. As shown in sketch 1, as we move the straight edge which extends along an X axis in a Y direction, we can continue to trace with our pencil the contour of the low points across the surface. This continued tracing may, for example, with the tool aligned with an X-axis, produce a low line of L_X. If we now rotate the straight edge 90 degrees as shown in sketch 2, we can repeat the same process and find a low line L_Y. The composite of sketches 1 and 2 shown as sketch 3 produces the intersection of L_X and L_Y, specifically determining the low point origin L_O on the surface. This cannot be

accomplished by use of Bahar because Bahar's footprint always results in planar change in response to a flaw, not linear change.

On the other hand, if you were to use applicant's straight edge for Bahar's purpose, you would not be able to flush one tile with another by simply flushing both tiles against applicant's edge, because applicant's edge, being on "a substantially flat elongated member," will not establish X and Y planar surfaces. Bahar is useful for aligning two separate planar surfaces. Applicant's device is useful for locating flaws in a single planar surface.

Furthermore, looking at sketch 4, if Bahar's "edge" is the entire perimeter (ABCD) of the box 10, it is not a straight edge as claimed but a rectangular edge incapable of performing applicant's purpose. But, if Bahar's "edge" is one side only of the box 10 (AB, or BC, or CD or DA), the "cavity" is not in the "edge" as claimed. Either way, applicant's claimed invention is distinguished over Bahar and Bahar in view of Queen.

For the above reasons, applicant submits that claims 12, 13, 15, 16 and 17 are allowable over the references cited and allowance of all claims is respectfully requested.

It is understood there is no fee due at this time. However, should a fee deficiency have occurred, please charge Deposit Account No. 50-1971 per 37 C.F.R. § 1.25.

Respectfully submitted,

11/11/04

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